



Certification Issues relating to PEDs as IFEs – Singapore's Perspective

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Agenda

- Why **Portable Electronic Devices** as In-Flight Entertainment?
- What are Authorities **concern**?
- CAAS **guidelines** to industry
- Possible steps **ahead**...

Why **PED** as IFE?

Enhanced Passenger Experience



Based on a survey conducted on **3,000 frequent travellers** by Honeywell in September 2013, many fliers think wireless internet **should always be available** on domestic and international flights.

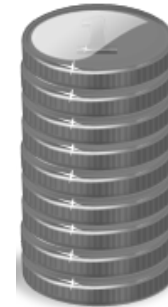


Fuel Savings



Based on a **180 pax** airplane

Low Initial / Maintenance Cost



Conventional IFE cost up to **3 Million USD** for a B757



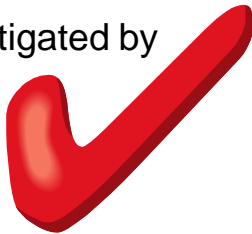
E-tablets cost only **USD 250k** per aircraft

What are Authorities **concern**?

Interference with aircraft navigation



Mitigated by



Established guidelines under RTCA DO-233, DO-294C, DO-307, etc

Flight Operations



Mitigated by



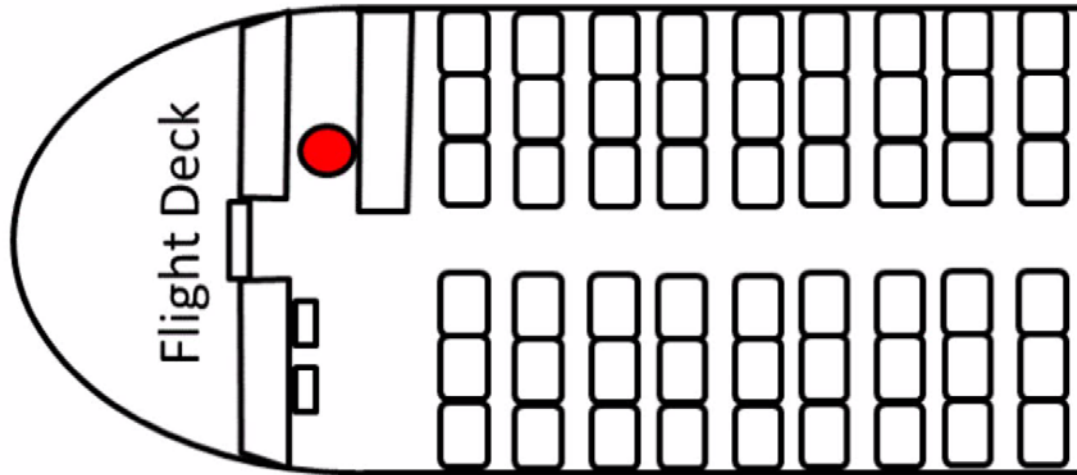
Training of flight attendant to deal with PED fire.

Fire Containment of bulk PEDs



Test on E-tablets

Tests were conducted in a B737 Classic with cabin ventilated to simulate an actual aircraft environment.



Analysis of tests



Confirms **concern** on fire hazard associated with bulk storage of e-tablets without separation.



Flammable gas released during thermal runaway creates **explosive environment**, in the presence of spark, will result in fire and explosion.

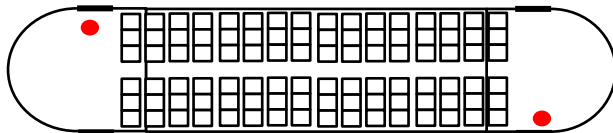
CAAS **guidelines** to Industry



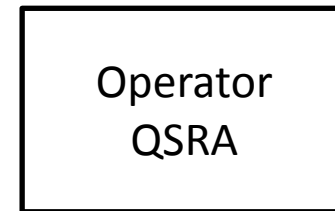
No usage of PED during take-off, landing and taxi on runway.



No more than **2 operator provided e-tablets** to be stored in each enclosed compartment.



Storage locations must be **approved** by CAAS



Operators must submit Qualitative Safety Risk Assessment to **mitigate** associated risk.

CAAS' perspective on **possible steps** ahead



Until **further** tests are conducted

Industry to conduct **more tests** and research...



Thank you

